

## REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 3, 4, 7-10 and 13-18 are in this case. Claims 14 and 18 have been rejected under § 112, first paragraph. Claims 3, 7-10 and 13 have been rejected under § 102(b). Claims 3, 4, 7-10 and 13-18 have been rejected under § 102(e). Claim 4 has been rejected under § 103(a). Dependent claims 7, 14, 15 and 17 have been canceled. Independent claim 13 and dependent claims 16 and 18 have been amended. New independent claims 19-22 have been added.

The claims before the Examiner are directed toward a system board with a connector with two ports. One port faces outward, parallel to the system board, at an exterior edge of the system board. The other port faces inward, parallel to the system board, to the interior of the system board in order to accommodate a peripheral device that is electrically connected to the system board only via the second port.

### § 112, First Paragraph Rejections

The Examiner has rejected claims 14 and 18 under § 112, first paragraph, as failing to comply with the written description requirement. The Examiner alleges that claims 14 and 18 contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, claims 14 and 18 recite “a peripheral device that is electrically connected to the system board only via said second / inward facing port”. The Examiner fails to see a basis in the specification for the exclusion of other

electrical connections within the peripheral device and the system board. The Examiner's rejection is respectfully traversed.

As noted in the Request for Continued Examination filed on February 3, 2005, claims 14 and 18 are supported in the specification by Figure 5 that shows a DiskOnKey™ flash memory 90 plugged into inward-facing USB port 74 and connected electrically to system board 80 only via inward-facing USB port 74. It was known in the art on the priority date of the above-identified patent application that a DiskOnKey™ flash memory has only one interface, a USB interface via which the DiskOnKey™ exchanges electrical signals with and receives electrical power from the device to which the DiskOnKey™ is connected. Attached please find five Exhibits. Exhibit A is a circuit diagram of a DiskOnKey™ dated June 4, 2002, showing that the only external interface of the DiskOnKey™ is the "USB\_A\_MALE" interface in the lower center of the circuit diagram. Exhibit B is a top view of a DiskOnKey™ with its cover removed. Exhibit C is a bottom view of a DiskOnKey™ with its cover removed. Exhibit D is a line drawing corresponding to Exhibit B and dated May 15, 2002. Exhibit E is a line drawing corresponding to Exhibit C and dated May 15, 2002. The label on the integrated circuit package in the middle of Exhibit B shows that "TITIN" or "TITAN", the name of the circuit illustrated in Exhibit A, was the internal name of the DiskOnKey™ project of M-Systems Flash Disk Pioneers, Ltd. of Kfar Saba, Israel, the assignee of the above-identified patent application. It follows that a DiskOnKey™, as illustrated in Figure 5, could be electrically connected to the system board of the present invention only via one of the system board's USB ports. Claims 14 and 18 specify that this USB port is the inward-facing port of the connector of the present invention.

### **§ 102(b) Rejections – Takase et al. ‘107**

The Examiner has rejected claims 3, 7-10 and 13 under § 102(b) as being anticipated by Takase et al., US Patent No. 6,261,107 (henceforth, “Takase et al. ‘107”). The Examiner’s rejection is respectfully traversed.

Claim 7 now has been canceled, thereby rendering moot the Examiner’s rejection of this claim.

Takase et al. ‘107 teach a system board 2 that includes an intermediate connector 6. An engagement portion 15 of connector 6 faces outward from system board 2 to engage with a cable connector 4. An engagement portion 14 of connector 6 faces downward to engage with a surface mount connector 5 that is soldered to system board 2. The Examiner has identified engagement portion 15 with the first port of the present invention, engagement portion 14 with the second port of the present invention, and surface mount connector 5 with the peripheral device of the present invention.

In the Request for Continued Examination filed on February 3, 2005, Applicant defended claim 7, based on a definition of “peripheral” dated June 2, 2003. For the convenience of the Examiner, this definition is again attached. According to this definition, a peripheral device is “optional in nature, as opposed to hardware that is either demanded, or always required in principle”. Connector 5 of Takase et al. ‘107 clearly does not fit this definition. Connector 5 is an integral part of system board 2 and as such is clearly not optional. Column 3 line 47 of Takase et al. ‘107 describes connector 5 as “mounted to” system board 2. Column 3 line 50 of Takase et al. ‘107 describes two connectors 5 as “attached to opposite surfaces of” system board 2. Column 4 lines 62-67 of Takase et al. ‘107 states:

The solder tail portions 11 are aligned in opposition to conductive pads...formed on the surface of circuit board 2. The solder tail

portions 11 and the conductive pads are then surface soldered by any desirable manner of soldering...in order to fix the connector 5 to the circuit board 2. (emphasis added)

In response the Examiner wrote:

In response to Applicant's arguments regarding the definition of "peripheral", please note that in Takase the connection between the second port and connector 5 is optional and removable. If the connection is not necessary then the second port and the connector 5 are not engaged with each other.

But if the "second port" (presumably engagement portion 14) and connector 5 are not engaged with each other, then it is connector 6, and not connector 5, that is disconnected from system board 2. In other words, it is connector 6, and not connector 5, that is a "peripheral device" with respect to system board 2. Connector 6 includes its own "inward facing port", and so clearly is not "operationally connected" to its own inward-facing port.

Thus, claim 7 is not anticipated by Takase et al. '107. Furthermore, claim 7 is not even obvious from Takase et al. '107. Accepting for the sake of argument the Examiner's characterization of connector 6 as a connector with an outward facing port 15 and an inward facing port 14, the only port to which it is obvious to connect a peripheral device is outward facing port 15.

Therefore, while continuing to traverse the Examiner's rejections, and in order to expedite the prosecution, Applicant has chosen to rewrite claim 7 in independent form by amending independent claim 13 to include the limitations of claim 7. Consequently, claim 7 has been canceled, and claim 18 has been amended to depend directly from claim 13.

Amended independent claim 13 now feature language which makes it absolutely clear that the system board of the present invention includes a peripheral device operationally connected to the inward facing port. Applicant believes that the

amendment of the claims completely overcomes the Examiner's rejections on § 102(b) grounds.

With independent claim 13 allowable in its present form, it follows that claims 3 and 8-10, that depend therefrom, also are allowable.

#### **§ 102(e) Rejections – Stout et al. '874**

The Examiner has rejected claims 3, 4, 7-10, and 13-18 under § 102(e) as being anticipated by Stout et al., US Patent No. 6,612,874 (henceforth, "Stout et al. '874"). The Examiner's rejection is respectfully traversed.

Claims 7, 14, 15 and 17 now have been canceled, thereby rendering moot the Examiner's rejection of these claims.

Stout et al. '874 teach a connector **16** that allows a peripheral device **14** to be operationally connected to a USB port **12** of a host **10** at an orientation other than the orientation imposed by the orientation of USB port **12**. Specifically, connector **16** includes a USB plug **18** that is inserted in USB port **12** and a peripheral interface **21**, for receiving peripheral device **14**, that can be set to several orientations relative to USB plug **18**.

The Examiner has identified USB port **12** and USB plug **18** of Stout et al. '874 with the two ports recited in claim 13. Because the two ports of the present invention are on the same connector, as illustrated for example in Figures 3A and 3B that show USB ports **72** and **74** as part of connector **70**, the Examiner's identification makes sense only if claim 13 is read with two extra commas: "a system board, comprising a connector, that includes etc."

Claim 13 as now amended makes it clear that the two ports are part of the connector, and not merely features of the system board. In addition, to avoid limiting claims 14, 15 and 17 with the limitation of claim 7, claims 14, 15 and 17 have been

rewritten in independent form, as new claims 19-21, also in a manner that makes it clear that the two ports are part of the connector. Correspondingly, claims 14, 15 and 17 have been canceled, and claim 16 has been amended to depend from claim 20.

With independent claims 13 and 20 allowable in their present form, it follows that claims 3, 4, 8-10 and 16, that depend therefrom, also are allowable.

#### **§ 103(a) Rejections – Takase et al. ‘107**

The Examiner has rejected claim 4 under § 103(a) as being unpatentable over Takase et al. ‘107. The Examiner’s rejection is respectfully traversed.

It is demonstrated above that independent claim 13 is allowable in its present form. It follows that claim 4, that depends therefrom, also is allowable.

#### **Other New Claims**

In the Response After Final Rejection filed on December 7, 2004, Applicant defended claim 13 against Takase et al. ‘107 by noting that engagement portion 14 of Takase et al. ‘107 is not a “port” as defined in the specification on page 3 line 23 through page 6 line 3:

Note that in the present context a “port” is understood to be an arrangement, typically but not necessarily a recess, in the connector, that facilitates a mechanical and electrical connection of the connector to a peripheral device. So, for example, pins 56 at the base of housing 58 of connector 52 are specifically *not* a port as herein understood because pins 56 connect to motherboard 50 and not to a peripheral device.

In response, the Examiner has noted that this definition is not recited as such in the claims, and that in any case the phrase “typically but not necessarily” makes the definition unclear. Therefore, new independent claim 22 has been added. New claim 22 is claim 13 with the “ports” restricted to “recesses” and also defined explicitly as facilitating mechanical and electrical connections of the connector to peripheral

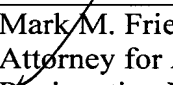
devices. New claim 22 clearly distinguishes the recesses of the present invention from engagement portion **14** of Takase et al. '107.

### **Objections to the Specification**

The specification has been objected to for failing to provide support for electrical connection of a peripheral device to the system board only via the second, inward facing port, as recited in claims 14 and 18. It is demonstrated above that DiskOnKey™ flash memory **90** of Figure 5 in fact provides this support.

In view of the above amendments and remarks it is respectfully submitted that independent claims 13 and 19-22, and hence dependent claims 3, 4, 8-10, 16 and 18 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

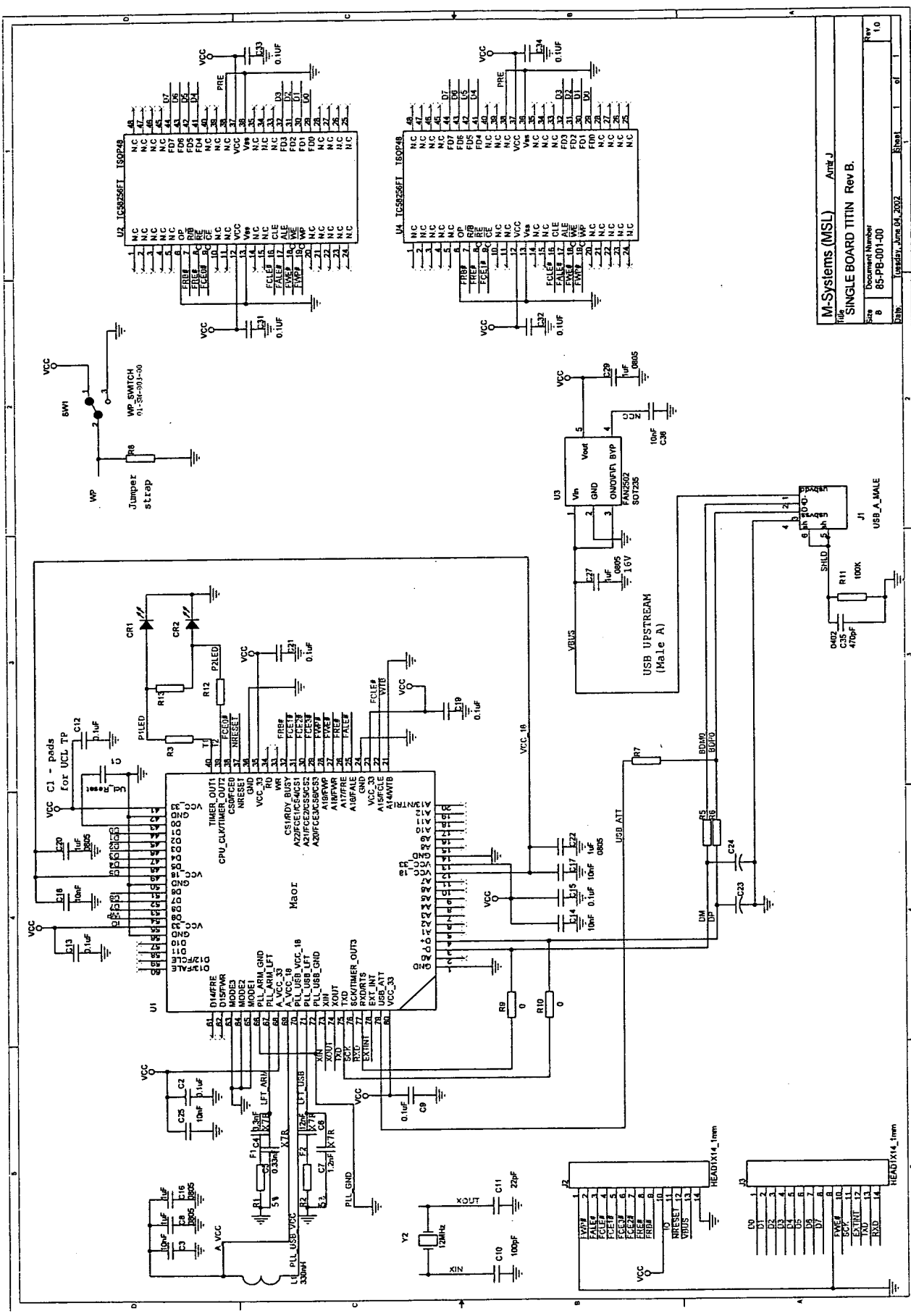
Respectfully submitted,



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Date: June 14, 2005



M-Systems (MSL)		Art J
SINGLE BOARD TITIN		Rev B.
Size	8	Document Number
Rev	1.0	
Date	1/24/94	Sheet 1 of 1

EXHIBIT A



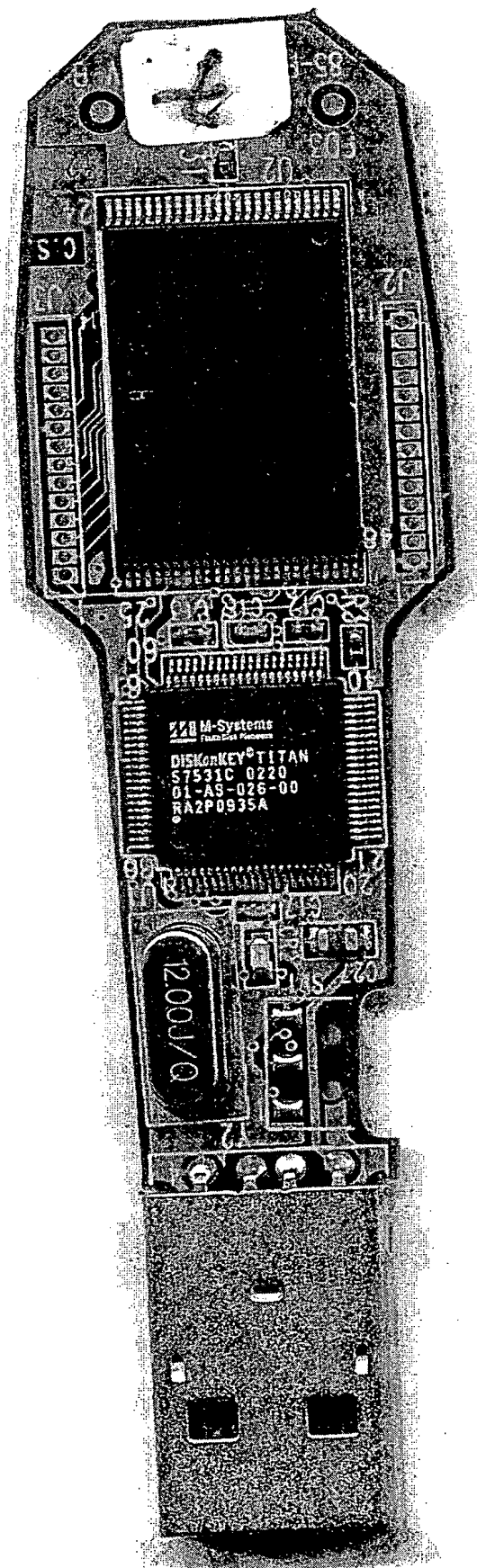


EXHIBIT B

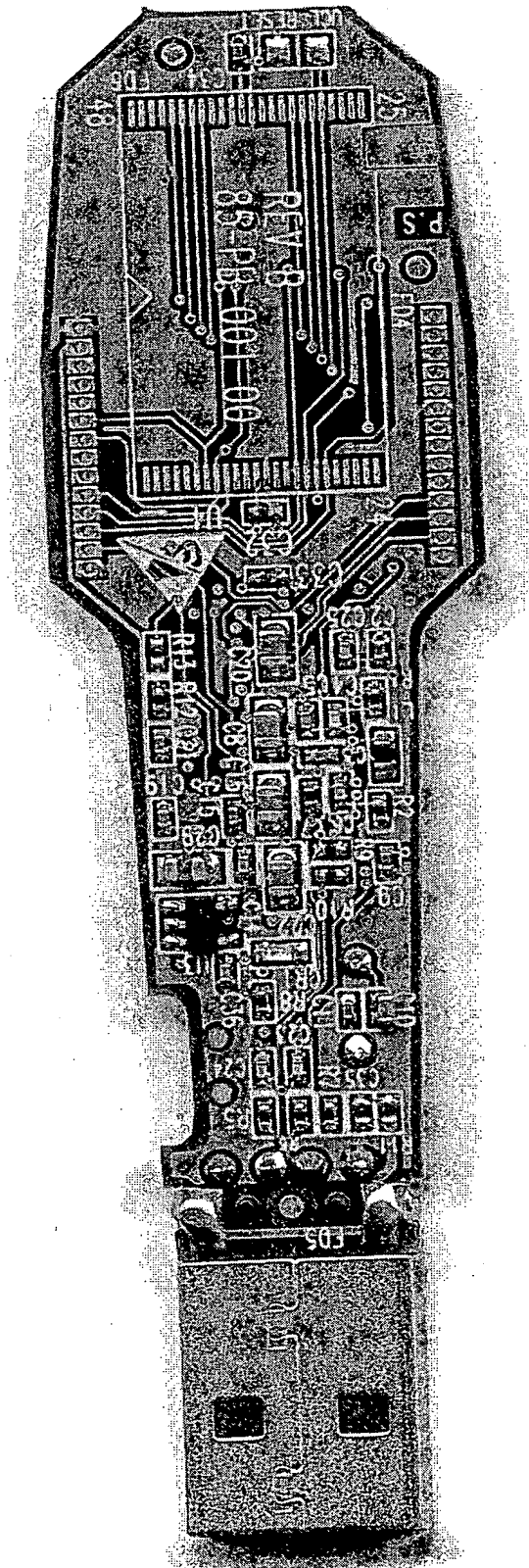


EXHIBIT C

A.Y.S.	COMPANY: M-SYSTEMS	
Elect.	PROJECT:single board titin	DATE: 15-05-02
LTD	LAYER: SILK CS	REV B
No. 065_02	NAME:	85-PB-001-00

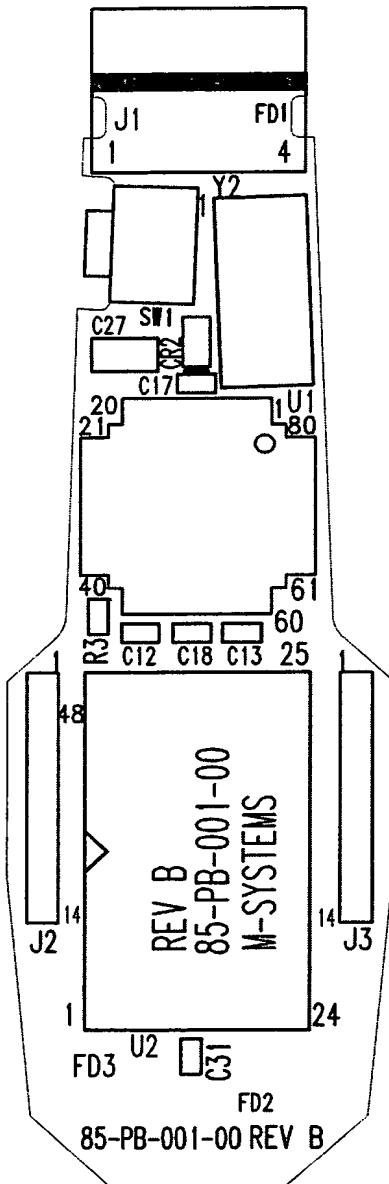


EXHIBIT D

A.Y.S. Elect. LTD No. 065_02	COMPANY: M-SYSTEMS	
	PROJECT:single board titin	DATE: 15-05-02
	LAYER: SILK PS	REV B
	NAME:	85-PB-001-00

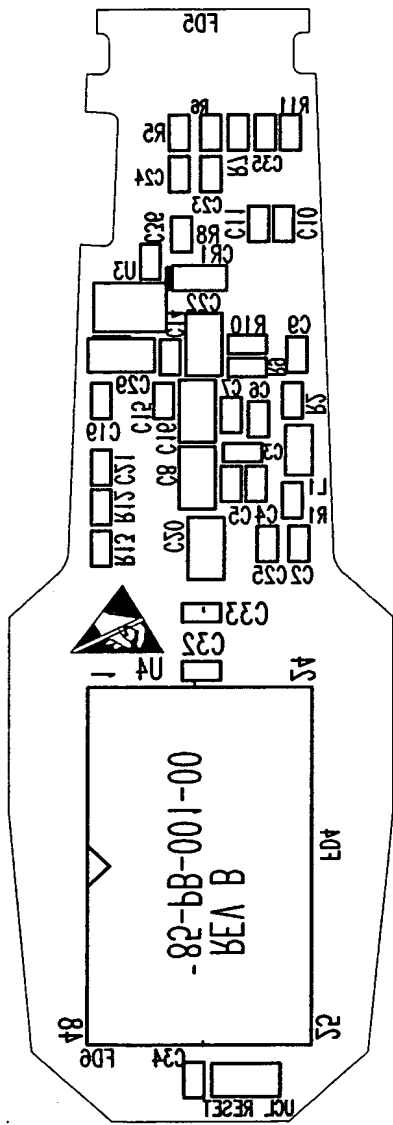


EXHIBIT E

# Peripheral

From Wikipedia, the free encyclopedia.  
Revision as of 09:36, 2 Jun 2003; view current revision  
←Older revision | Newer revision→

A **peripheral** is a type of computer hardware that is added to the computer, in order to expand its abilities. More specifically the term is used to describe those devices that are optional in nature, as opposed to hardware that is either demanded, or always required in principle. The term also tends to be applied to devices that are hooked up externally, typically though some form of computer bus like USB.

Typical examples include joysticks, printers and scanners. Devices such as monitors and disk drives are not considered peripherals because they are not truly optional, and video capture cards are typically not referred to as peripheral because they are internal devices.

Retrieved from "<http://en.wikipedia.org/wiki/Peripheral>"

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